OBJECTIVES: To describe the referrals and their flow within and outside the referral networks, and examine the effects of the audit on the adherence to referral guidelines and quality of services. **METHODS:** First, series of meetings were held with study teams (5 referral networks, district and regional management officers) to provide a framework for the referral cycle. The framework then provided the basis for the implementation of 2 referral audit cycles of 3 months each by each referral network. The audit cycle involved data collection, analysis, action plan formulation, action plan implementation, and reassessing the situation with another cycle. A total of 12 health centers and 4 hospitals participated in the study. The first 4 referral networks had a midwife and the head midwife from the health centres district hospital respectively as member. The lead midwifes from the district and regional hospitals constituted the fifth network. **RESULTS:** Over 90% of the 446 referrals were mothers with maternal related complications. Cycle 2 findings shows improvement in quality of care provided for patients. For instance, an increase in; partograph use from 40% to 50%, feedback to home facility from 37% to 58%, health worker accompanying referred patient from 64% to 80%, health workers calling ahead of referrals from 38% to 65%, and absence of key staff decreased about 20% to 2%. Poor adherence to referral procedures, lack of networking among providers, absence of key staff, Socio-cultural beliefs, poor transportation were the main barriers to quality of care. **CONCLUSIONS:** Establishment of formal and informal networks among providers, community level engagement, and availability of referral protocol and adherence facilitate good quality of care.

PHS141

EFFECTS OF FEDERAL PARITY ON SUBSTANCE USE DISORDER TREATMENT

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OBJECTIVES: To examine the effects of U.S. federal parity legislation on substance use disorder treatment in the first year after passage. **METHODS:** We used insurance claims data from Aetna Inc. health plans in ten states with state-level parity laws for substance use disorder treatment. We used a difference-in-differences study design to compare changes in outcomes among self-insured health plan enrollees subject to federal parity in the years before and after implementation of federal parity (2009-2010) with changes in outcomes among a comparison group of fully insured health plan enrollees previously covered by state substance use disorder parity laws (N=298,339). Outcomes included: shares of enrollees using any substance use disorder treatment; annual total spending on substance use disorder treatment; out-of-pocket spending on substance use disorder treatment and three substance use disorder performance measures: identification, treatment initiation and treatment engagement. **RESULTS:** In the first year of implementation, federal parity did not lead to changes in the proportion of enrollees using substance use disorder treatment. Total spending on substance use disorder treatment per enrollee increased more for self-insured enrollees subject to federal parity than for fully-insured enrollees ($16.11 vs. $6.12, difference $9.99, 95% CI: $2.54 to $18.21). Federal parity was not associated with any statistically significant changes in identification, treatment initiation or treatment engagement. **CONCLUSIONS:** Inclusion of substance use disorder services in the federal parity law did not result in substantial increases in health plan spending. It will be critical to evaluate the effects of federal parity in more recent data, after regulations affecting the management of care (e.g., utilization review, network access) took effect.

PHS142

ABDOMINAL AORTIC ANEURYSM SCREENING: THE IMPACT OF THE SAAAVE ACT OF 2007

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OBJECTIVES: Abdominal aortic aneurysm (AAA) is typically asymptomatic, but over time may lead to a rupture of the aorta, with a high fatality rate. The Screening AAA Very Efficiently (SAAAVE) Act of 2007 adds a new preventative service as part of the Welcome to Medicare visit (WTM), a free one-time AAA screening for men with smoking history, and men and women with a family history of AAA. This study aimed to estimate utilization of the new benefit and its impact on AAA diagnostics and treatment. **METHODS:** We analyzed Medicare claims data (2005-2009) to estimate Welcome to Medicare examination utilization (CPT codes G0344 and G0402) among new enrollees, and use of the new AAA screening benefit (CPT code G0389). We also examined utilization of AAA-related diagnostics and treatment from 2005 to 2009, i.e., two years prior to and following the 2007 adoption of the new benefit. **RESULTS:** Medicare data revealed very low uptake of AAA screening among newly enrolled Medicare beneficiaries, with rates of less than 1% each year, and under 1% among those eligible for the screening benefit. The number of newly enrolled beneficiaries newly diagnosed with AAA ranged from 6,660 to 9,260 per year, increasing over time. AAA-related use of abdominal ultrasound has decreased from 13 per 100 AAA patients in 2005 to 10 per 100 AAA patients in 2009. Overall AAA repair procedure rates have remained constant at 7 per 100 AAA patients, with endovascular repair use increasing and open repair use decreasing. **CONCLUSIONS:** Medicare data showed that the Welcome to Medicare (WTM) visit for new enrollees and the AAA screening benefit established by the 2007 SAAAVE Act have been underutilized, and have not affected diagnostic and repair procedure rates for AAA. The need for screening remains, given that AAA incidence is not declining in Medicare beneficiaries.

DISEASE-SPECIFIC STUDIES

GASTROINTESTINAL DISORDERS – Clinical Outcomes Studies

PGI1

ADVERSE EVENTS ASSOCIATED WITH PEDIATRIC USE OF PROTON PUMP INHIBITORS: ANALYSIS OF THE FDA ADVERSE EVENT REPORTING SYSTEM

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OBJECTIVES: Proton pump inhibitors (PPIs) are commonly used in children for treating gastroesophageal reflux disease and erosive esophagitis symptoms. However, the safety profile for long-term use of PPIs in children is still largely unclear. The objective of this study was to identify the adverse events (AEs) associated with pediatric PPI use and stratify them by individual PPI, age of patient (child versus infant), and whether the PPI was a primary suspect drug or used with other medications. PPI use has been related to respiratory infections as well as activity-related bone fractures. Children with asthma are much more likely to be treated with a PPI than nonasthmatic children. **METHODS:** A retrospective, descriptive analysis was conducted. Reports of AEs related to PPIs from 1997 through 2011 for children (aged 1-17 years) and infants (<1 year old) were retrieved from the FDA Adverse Event Reporting System. **RESULTS:** A total of 112,060 reports were retrieved for children. Of these, 53.8% were for omeprazole, 24.7% for lansoprazole, 9.9% for esomeprazole, 10.1% for pantoprazole, and 1.5% for rabeprazole and dexlansoprazole combined. There were 14,122 deaths, 9,221 associated with omeprazole. There were 46,046 initial or prolonged hospitalizations. There were 6093 reports of disability. The majority (92,954) of the reports involved concomitant use of a PPI; the PPI was the primary or secondary suspect drug in the remainder of the reports. There were 3,794 reports retrieved for infants, of which 38.9% were associated with omeprazole and 39.8% with lansoprazole. There were 500 reports of infant deaths, with 236 associated with omeprazole. There were 1,524 events involving hospitalization. Concomitant use of PPIs accounted for 3198 (84.3%) of the reports. **CONCLUSIONS:** Pediatric PPI-related AEs involved death, hospitalization, disability, and life-threatening outcomes. Further investigation is warranted. Currently, the FDA recommends that health care providers deliver the shortest, lowest-dose PPI regimen as possible.

PGI2

PATIENT CHARACTERISTICS AND DRUG UTILIZATION AMONG HEPATITIS C (HCV) PATIENTS IN A LARGE PAYER DATABASE

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OBJECTIVES: To investigate the characteristics of Chronic Hepatitis C (CHC) patients, their co-morbid conditions, treatments and associated costs using large health care payer databases. **METHODS:** This retrospective study used data from Truven Health Analytics MarketScan databases from January 1, 2006-March 31, 2012. Adult patients with ≥2 diagnosis claims of chronic HCV (CHC) were selected. They had at least six months of continuous health plan and drug plan enrollment pre/post index date. CHC patients were grouped by disease severity as non-cirrhotic disease (NCD), compensated cirrhosis (CC), or end-stage liver disease (ESLD). Co-morbidities, treatment rates, health care utilization, and cost were assessed by disease severity. **RESULTS:** 57,084 CHC patients met inclusion criteria, of whom 43,561 (76.3%) were NCD, 6,830 (12.0%) were CC, and 6,693 (11.7%) were ESLD. Mean age was 50.6 yrs [standard deviation (SD) =10.1]. 58.1% of patients were male and 73.8% had commercial insurance. Common co-morbidities included type II diabetes (DM) (13.3%), substance abuse (14.5%), and depression (11.7%). Diagnosis of DM and substance abuse increased with disease severity (DM diagnosed in 14%/20%/27% and substance abuse in 20%/22%/26% of NCD/CC/ESLD CHC patients, respectively). Detection of all three co-morbidities increased following HCV diagnosis. Depression increased from 12% to 16% following HCV diagnosis. Anemia was highly prevalent following diagnosis (12.3%), especially in the ESLD cohort (28.3%). In the six months following HCV diagnosis, utilization of inpatient, hospital outpatient, emergency room, physician office, and pharmacy services increased significantly. During the study period, 10.9% of the population received treatment for HCV, 83.1% with dual therapy compared to 13.2% with telaprevir and 3.4% with boceprevir-based triple therapy. The modest use of the protease inhibitors likely reflects their coming to market in 2011. **CONCLUSIONS:** A small percentage of CHC patients receive treatment. DM, substance abuse, and depression are common among patients chronically infected with HCV. Health care utilization increased after CHC diagnosis.

PGI3

DO YOU NEED TO ACCOUNT FOR BASELINE VIRAL LOAD WHEN ASSESSING THE RELATIVE EFFICACY OF INTERVENTIONS FOR TREATMENT NAÏVE HBEAG POSITIVE CHRONIC HEPATITIS B (CHB) PATIENTS? RESULTS FROM UNADJUSTED AND ADJUSTED NETWORK META-ANALYSES (NMA)

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OBJECTIVES: Baseline viral load (BVL) is a known predictor of time to treatment response (achievement of undetectable viral load, UVL) in CHB studies. No